

#

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number:  $\frac{10/524}{750}$  Source:  $\frac{9CT}{28/22/2005}$ 

## ENTERED



PCT

RAW SEQUENCE LISTING DATE: 08/22/2005
PATENT APPLICATION: US/10/524,750 TIME: 17:10:26

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3 <110> APPLICANT: Martin, Gregory B.
             Abramovitch, Robert B.
             Lin, Nai-Chun
             Kim, Young-Jin
      8 <120> TITLE OF INVENTION: BACTERIAL EFFECTOR PROTEINS WHICH INHIBIT PROGRAMMED
              CELL DEATH
     11 <130> FILE REFERENCE: 3213/104
     13 <140> CURRENT APPLICATION NUMBER: 10/524,750
C--> 14 <141> CURRENT FILING DATE: 2005-02-15
     16 <150> PRIOR APPLICATION NUMBER: 60/404,339
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     17 <151> PRIOR FILING DATE: 2002-08-16
     19 <150> PRIOR APPLICATION NUMBER: 60/425,842
     20 <151> PRIOR FILING DATE: 2002-11-12
     22 <150> PRIOR APPLICATION NUMBER: PCT/US03/25247
     23 <151> PRIOR FILING DATE: 2003-08-16
     25 <160> NUMBER OF SEQ ID NOS: 54
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     31 <212> TYPE: DNA
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     37 caggiteage egegaeeete gaataeteee eegtegaaeg egeeegeaee geegeeaaee 180
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     44 atcageegag atteggaaet egetategag eteegtgggg egettegteg ageggtteae 600
     45 caacaggegg egteagegee agtgaggteg eecaegeeaa eaceggeeag eectgeggea 660
     46 tcatcategg geageagtea gegttettta tttggaeggt ttgeeegttt gatggegeea 720
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     48 cgcgtcaacc aaagacccat acgcgtcgac agggctgcga tgcgtaatcg tggcaatgac 840
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     54 cgtgcaacac gattgcgggt gatgccggag cgggaggatt acgaaaataa tgtggcttat 1200
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**RAW SEQUENCE LISTING**PATENT APPLICATION: **US/10/524,750**DATE: 08/22/2005

TIME: 17:10:26

Input Set : A:\1041.app

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58 ctgggtttta, aggatgegge agateateae aeggatgaeg tgaegeaetg tettttttgge 1440
59 ggagaattgt cgctgagtaa tccggatcag caggtgatcg gtttggcggg taatccgacg 1500
60 gacacgtcgc agccttacag ccaagaggga aataaggacc tggcgttcat ggatatgaaa 1560
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67 <212> TYPE: PRT
68 <213> ORGANISM: Pseudomonas syringae
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77 Gly Ala Ser Ser Ser Asn Ser Pro Gln Val Gln Pro Arg Pro Ser Asn
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80 Thr Pro Pro Ser Asn Ala Pro Ala Pro Pro Pro Thr Gly Arg Glu Arg
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83 Leu Ser Arg Ser Thr Ala Leu Ser Arg Gln Thr Arg Glu Trp Leu Glu
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86 Gln Gly Met Pro Thr Ala Glu Asp Ala Ser Val Arg Arg Pro Gln
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89 Val Thr Ala Asp Ala Ala Thr Pro Arg Ala Glu Ala Arg Arg Thr Pro
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92 Glu Ala Thr Ala Asp Ala Ser Ala Pro Arg Arg Gly Ala Val Ala His
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95 Ala Asn Ser Ile Val Gln Gln Leu Val Ser Glu Gly Ala Asp Ile Ser
98 His Thr Arg Asn Met Leu Arg Asn Ala Met Asn Gly Asp Ala Val Ala
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101 Phe Ser Arg Val Glu Gln Asn Ile Phe Arg Gln His Phe Pro Asn Met
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104 Pro Met His Gly Ile Ser Arg Asp Ser Glu Leu Ala Ile Glu Leu Arg
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107 Gly Ala Leu Arg Arg Ala Val His Gln Gln Ala Ala Ser Ala Pro Val
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110 Arg Ser Pro Thr Pro Thr Pro Ala Ser Pro Ala Ala Ser Ser Ser Gly
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        210
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113 Ser Ser Gln Arg Ser Leu Phe Gly Arg Phe Ala Arg Leu Met Ala Pro
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116 Asn Gln Gly Arg Ser Ser Asn Thr Ala Ala Ser Gln Thr Pro Val Asp
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119 Arg Ser Pro Pro Arg Val Asn Gln Arg Pro Ile Arg Val Asp Arg Ala
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125 Leu Val Gln Gln Gly Val Asn Leu Glu His Leu Arg Thr Ala Leu Glu
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RAW SEQUENCE LISTING DATE: 08/22/2005 PATENT APPLICATION: US/10/524,750 TIME: 17:10:26

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132					325					330	_		_		335		
134	Val	Gln	His	Pro	Leu	Leu	Asn	Leu	Asn	Val	Ala	Leu	Asn	Arg	Met	Leu	
135				340					345					350			
137	Gly	Leu	Arg	Pro	Ser	Ala	Glu	Arg	Ala	Pro	Arg	Pro	Ala	Val	Pro	Val	
138	-		355					360		,	_		365				
140	Ala	Pro	Ala	Thr	Ala	Ser	Arg	Arg	Pro	Asp	Gly	Thr	Arg	Ala	Thr	Arg	
141		370					375	_		_	-	380	•			_	
143	Leu	Arg	Val	Met	Pro	Glu	Arg	Glu	Asp	Tyr	Glu	Asn	Asn	Val	Ala	Tyr	
	385	_				390			_	_	395					400	
146	Gly	Val	Arq	Leu	Leu	Asn	Leu	Asn	Pro	Gly	Val	Gly	Val	Arq	Gln	Ala	
147	•		_		405					410		•			415		
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150				420			-	_	425		,			430			
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153			435				•	440					445		_		
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156		450	•		4		455					460		. 4		•	
	qaA	,	Ala	αsA	His	His	Thr	qaA	asp	Val	Thr	His	Cvs	Leu	Phe	Glv	
	465			-		470		-	-		475		-			480	
		Glu	Leu	Ser	Leu		Asn	Pro	Asp	Gln		Val	Ile	Glv	Leu		
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168	-		515			•		520	•				525			•	
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												tggcgcaggg					
												ccgaggctgc					
	gcacgtgcag aggaaagaca cacgccggag gc																
	gagggaggac gcacaccgca ggcgcttgcc ggta																
																ggtatt	
																acagta	
																ggctca	
																gcgtca	
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RAW SEQUENCE LISTING DATE: 08/22/2005
PATENT APPLICATION: US/10/524,750 TIME: 17:10:26

Input Set : A:\1041.app

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196 gggttgatga cgcctaatca gagacgtccg tcgagcgctt cgaacgcgtc tgcctctcaa 840
197 aggcctgtag acagaagccc gccacgcgta aaccaggtac ccacaggcgc taacagggtt 900
198 gtgatgcgta atcatggtaa taacgaggcc gacgccgcgc tgcaaggatt ggctcagcag 960
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202 gggcctcgtc ccgctcgtgc tcaagcgcct cgtccagccg ttccggtggc tcccgcgacc 1200
203 gtetecagge gaccagatag egegegtgee acaagattge aggtaatace ggegegggag 1260
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205 gtcagggaga ctgttgcggc ctttgtaaac aaccgttacg agcggcaggc ggttgttgcc 1380
206 gacatacgcg cagccctaaa tttatctaaa caattcaata agttgcgtac ggtctctaag 1440
207 geogatgetg cetecaataa acegggette aaggatgegg eggaceaeee agaegaegeg 1500
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210 gtgttcatgg atatgaaaaa acttgcccaa ttcctcgcag gcaagcctga gcatccgatg 1680
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216 <212> TYPE: PRT
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247 Arg Ile Val Gln Gln Leu Val Asp Ala Gly Ala Asp Leu Ala Gly Ile
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**RAW SEQUENCE LISTING**PATENT APPLICATION: **US/10/524,750**DATE: 08/22/2005

TIME: 17:10:26

Input Set : A:\1041.app

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271 Ala Ser Asn Ala Ser Ala Ser Gln Arg Pro Val Asp Arg Ser Pro Pro
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280 Gly Val Asp Met Glu Asp Leu Arg Ala Ala Leu Glu Arg His Ile Leu
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283 His Arg Arg Pro Ile Pro Met Asp Ile Ala Tyr Ala Leu Gln Gly Val
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286 Gly Ile Ala Pro Ser Ile Asp Thr Gly Glu Ser Leu Met Glu Asn Pro
289 Leu Met Asn Leu Ser Val Ala Leu His Arg Ala Leu Gly Pro Arg Pro
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292 Ala Arg Ala Gln Ala Pro Arg Pro Ala Val Pro Val Ala Pro Ala Thr
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295 Val Ser Arg Arg Pro Asp Ser Ala Arg Ala Thr Arg Leu Gln Val Ile
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                                      410
298 Pro Ala Arg Glu Asp Tyr Glu Asn Asn Val Ala Tyr Gly Val Arg Leu
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313 Pro Asp Asp Ala Thr Gln Cys Leu Phe Gly Glu Glu Leu Ser Leu Thr
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317 515
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319 Ser Glu Ser Tyr Ser Arg Glu Ala Asn Lys Asp Leu Val Phe Met Asp
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322 Met Lys Lys Leu Ala Gln Phe Leu Ala Gly Lys Pro Glu His Pro Met
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328 Ile Val Pro
332 <210> SEQ ID NO: 5
333 <211> LENGTH: 1740
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RAW SEQUENCE LISTING ERROR SUMMARY DATE: 08/22/2005 PATENT APPLICATION: US/10/524,750 TIME: 17:10:27

Input Set : A:\1041.app

Output Set: N:\CRF4\08222005\J524750.raw

## Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

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Seg#:6; Xaa Pos. 367
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Seq#:48; Xaa Pos. 2,3,4,5,6,7,8,9,10,11,12,19
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Seg#:50; Xaa Pos. 2,4
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VERIFICATION SUMMARYDATE: 08/22/2005PATENT APPLICATION: US/10/524,750TIME: 17:10:27

Input Set : A:\1041.app

Output Set: N:\CRF4\08222005\J524750.raw

L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:361 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:1080
L:451 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:352
L:884 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:0
M:341 Repeated in SeqNo=24
L:1253 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:46 after pos.:0
L:1334 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48 after pos.:0
M:341 Repeated in SeqNo=48
L:1376 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:49 after pos.:0
L:1400 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:50 after pos.:0
L:1419 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51 after pos.:0
L:1609 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:54 after pos.:0
M:341 Repeated in SeqNo=54